# TICKETS ONLINE

## Problem with the current system

Currently, there are two ways to purchase a ticket to most concerts, sporting events, or shows. Customers can either wait in line at a ticket outlet and pay with cash, or they can call from a telephone and charge the tickets. Both options are time consuming and frustrating. There is usually one ticket representative available to help all customers at the ticket outlets. Most of the time, the representative does not know how to operate the ticket terminal correctly and efficiently. On the other hand, ordering and charging tickets over the phone is a hair raising experience. Callers usually have to hold for a very long time until a ticket operator can assist them. Sometimes, customers do not know what they want, and the representative must then assist the customer in finding the correct information. In the meantime, customers in line grow very impatient and disgruntled. Another inconvenience is that the current system is only available at certain times of the day. The outlets and phone service both close at the same time. This can be an inconvenience for customers.

The current ticket selling system has a need for a more efficient way of serving its customers. One possibility is to create an interface that can be used on the internet and later implemented in ATM-like settings. This enables the customer to interact directly with the data. With the interface accessibility over the internet, a customer can have twenty-four hour access to the purchasing system. Also, the user can browse and have the option to buy a ticket in the comfort of their own home. This should shorten the long lines at the outlets and long waits on the phone lines. In the long run, the internet interface can reduce manpower, saving the business money.

## Design of interface

This new system caters to customers with a variety of needs and serves them at all times of the day. Those who wish to purchase a ticket and know all of the required information can do so with a limited amount of time and effort. Those who would like a ticket, but do not know all of the required information, can buy the ticket after searching for the unknown data. The length of time required to go through the whole process is dependent on the amount of information the customer provides. If more initial information is given, less time is required for the search. The final group of people, who might not intend to purchase tickets, have the ability to browse through the program without the obligation to buy tickets. This allows users to explore the program's capabilities.

We simulated the interface using Hypercard. Our technical knowledge of programming limits the capability of the interface, but the functions that we intended to have are still listed. The actual searches for the information are not done, but there is enough data to simulate the transactions. The user first chooses between a concert, sporting event, or show. Next, the customer is prompted to input information in one or more of the three fields: event, state(location), and date. The customer is then guided through a search to find the lacking information. Finally, one can buy the ticket or cancel the transaction.

## Description of the interface and its functions

The interface is mouse driven, using simple point and click commands. The user moves through a series of screens which are used to gather ticket information and purchase the ticket. The interface begins with a screen welcoming the customer to the on-line system, hypothetically named "Tickets On-line". The user is given a phone number and an on-line address that can be used if there are any problems with the

system or if the customer has an additional questions. Available tickets are grouped into three categories: concerts, sporting events, and shows. The user is first asked to choose one of these categories. Each category is displayed on a button with an icon. The categories cover all of the types of tickets sold by the existing ticket service, Ticketmaster. Grouping the tickets narrows the scope of the search and saves time for the customer.

When the user clicks on a button to select a category, the next screen appears. The user is then prompted for information regarding the ticket. There are three fields on this page: event, state, and date. The user may input information in one, two, or all three of these fields. Any fields may remain blank. The design of the date field forces the user to enter the date in the format used in the program. Under the event and state input blanks are scroll boxes which list all of the available choices for the field. The user can scroll through the list and double click on the choice, or he can type the input in the box over the related list. If the user chooses to type in the box, as the letters are typed, the highlight in the scroll box highlights the choice that most resembles the input. If the user misspells the input or enters information that is not listed, the choice that most closely resembles the input is highlighted. If the user tries to continue to the next step with an entry that is not in the database, a beep will alert them of the inconsistency. Then, the program will wait for a correction or deletion of the entry. In the bottom right-hand corner of the page are three buttons that will appear on every page. The cancel button will take you back to the introduction page, the left- hand arrow will take you to the previous page, and the right-hand arrow will take you to the next page. Once the user has entered the information on the page and clicks the forward button, the search begins.

There are several routes that the search can take. Completing all three of the initial fields is the most direct. If the customer enters the event, state, and date, the next screen is a page which gives general information about the concert. The event, location, and date are reiterated. New information is also given, such as a general description of the event, ticket prices, venue information, and any special promotions. From this page, the user has the option to buy tickets for the event or to start a new search.

The next screen is simply an informational screen involving legal information regarding on-line ordering policies and the policies of the ticket company. We did not address these issues since they were not pertinent to the design of the project. To exit this screen, the user has two options. First, if the user clicks the forward button, he is accepting the conditions and policies stated. This is explained clearly to the user beside the button. If the user does not accept the conditions and policies, he can cancel the ticket purchase by clicking the cancel button.

If the user continues, seating location is the next item. The system automatically assigns the customer the next best available seats in the specified price bracket. If the customer wishes to choose from available seats, he can view an optional screen. This screen displays a diagram of the event venue. The customer can choose his tickets from the available seats, designated by a color variation on the diagram.

Once the seating information is obtained, the user continues with the ticket purchase. The next screen displays the ticket information for customer verification. The user is then prompted for payment information. The user may only pay by credit card. The credit cards accepted by the company are displayed on the page with buttons corresponding to each card. The user must choose a credit card by clicking the appropriate button. The user is also prompted for the expiration date, account number, and name on the credit card, along with a phone number that can be used to contact the customer. The verification of the credit card information was not addressed by our design. Given the number of ordering services appearing on the internet, we assume that some type of software is available for this purpose. At the end of the page, the customer is asked to verify that all information is correct by clicking the forward button. The customer has the option to go back and change any incorrect information before proceeding with the transaction. The customer also has the option to cancel the purchase.

The next step involves obtaining the actual tickets. The customer has two options. The tickets can be picked up at the event, or they can be mailed to the customer. In both cases, a unique reference number is assigned to the transaction. The reference number can be used to easily access each ticket transaction. The customer can use this number when referring to the ticket purchase at any time. If the user wants the tickets mailed, the user is prompted for mailing information. If the user wants to pick up the tickets, the information regarding the pick up is displayed. This is the last step in the purchase. After this page, the user then views a screen confirming the ticket purchase, with the option to start another search or cancel the transaction.

If the customer does not know all three fields of information, he will be guided through a search for the correct information. If the customer only completes the event field, the next screen will show a list of dates and locations for the event, i.e. the concert tour schedule for a band. The user will then select the date and location of the event that interests him. Once the location and date are selected, the customer will then see the general information page for the event, and the ticket buying process will continue as outlined above. If the customer only selects a state, the next screen will prompt the user to select a city within the state. Then, a list of all the events in a city for the upcoming month is displayed. Once a customer selects an event, the interface once again goes to the general information page and through the ticket buying process. If the customer enters a specific date, the next page prompts the user to input the state in which he wants to attend the event. The user is then asked to narrow down the search by entering the city within the state. All events in the city for the specific date are listed. After the user selects a specific event, he will proceed through the purchasing process. The customer may enter the event and date. In this case, the system will go directly to the general information page, since this eliminates all but one possible item. The customer then goes through the ticket purchasing process. If the date and event entered do not correspond to an item on the database, the user hears a beep. The program then waits for the data to be reentered or deleted. Entering the information in the date and state fields prompts the customer to enter a city within the selected state. A list of all events for the specified city on the given date is then displayed, and the user makes his selection. If the user enters the event and the state, a list of dates and locations within the state is displayed on the screen. The user can then select the specific event, and the ticket can be purchased.

Many features have been added to the interface to increase its usability. The interface should not need an explanation. The first time user should be able to use the system without any skills except the ability to use a mouse. Knowledge in the head that is required is a basic idea of what is desired in order to make decisions. All other information needed is present in the world such as the scroll lists of the possible choices.

There are several constraints to narrow the broad spectrum of choices. The user either has a list from which to choose and a field that allows a typed entry, or their is just a list. The lists include what is appropriate at that step in the process. The options available relate to the previous decisions that have been made. The typed field has more opportunity for error. To compensate for this, the system responds to each new character that is typed by scrolling automatically to the place in the list at which the typed characters are located. Since the lists have been arranged in alphabetical order, it should be easy for the user to determine if the words that are being typed are included in the list. This should decrease the probability of a misspelled word because the correct spelling will be on the screen. Another constraint is data entry. The input boxes for each entry limit the user by their size and location. If the input requires a specific format, the format is pre-set in the input box. The date entry uses this concept. The input boxes for dates are already formatted as "--/--/--". The only slots available for entry would be the spaces for the day, month, and year. As the user types the numbers, they are automatically placed in the following blank spaces. The phone number entry is similar.

The items previously mentioned are physical constraints, but there are also semantic, logic, and cultural

constraints. Semantic constraints are used in each screen. Each screen specifies its purpose so that the user understands what information is needed to proceed. For example, when a city is needed, the user is prompted for acity. Not only is the meaning conveyed, but the process is logical. After the specification of a state, a natural response is to ask for the city. This represents a logical constraint. Also, the user can deduce what information is needed by looking at the fields in the second screen. This screen has fields for event, location, and date. It is logical to assume that if one of the fields was not filled, the information would need to be supplied at some point in the process. Cultural constraints apply to the buttons. The color of the button relates to its function. Culture dictates that green means "go", and red means "stop". The neutral color of the button to move backward discourages incorrect assumptions.

The buttons incorporate more usability techniques. The buttons are visible due to their color, and they afford clicking. Reinforcement is incorporated to ensure that the user recognizes their purpose. The buttons on the first page use both text and icons to confer their meaning. The move forward and move backward buttons utilize both color and icons. The cancel button uses both text and color. Text is only used when necessary. For example, the forward and backward buttons just display arrows. The mapping aids in the progression through the screens because the buttons to move forward, back, and cancel are where one would expect. This is due to the standardization of the controls on most computer packages. The ease of flow between screens minimizes the memory storage required. Another factor is that the actual search is not deep which also lessens the memory requirements.

The conceptual model is rather simple. Due to this, the gulfs of execution and evaluation are decreased. There should be little confusion as to what functions are possible and each action's consequences. Each action is accompanied by feedback to let the user know that an action has occurred. When a button is clicked, it flashes to let the user know that is has been activated. When at item on a list is chosen, it is highlighted and places in the input box. When the user tries to proceed with a misspelled word, he is alerted with a beep. Any information previously selected or input is displayed on the subsequent screens. The user will not be able to change this feedback unless he moves back to the previous screens. This is an effort to prevent error. For added clarity, all buttons and fields serve one purpose. All of the options and information are visible and clear. Clutter is minimized by not having unnecessary items on the screen. Lastly, the page set-up is consistent throughout ensuring standardization within our interface.

Errors are not extremely harmful or irreversible. If a choice is made that is later unwanted, the user can usually move back to a previous page or cancel the transaction. The only irreversible function is the action of purchasing the ticket. Because of the severity of this action, much verification is required.

## Problems solved by new interface

Tickets on-line not only provides the customer with more flexibility for securing tickets for entertainment, but it will soon be the easiest way to purchase tickets. Because of tickets on-line, we may soon eliminate long lines at the ticket outlets, as well as telephone difficulties. Often when calling for a ticket on the phone, the line is either busy, or if the customers do get through, they must stay on hold for hours on end. After waiting so long, there is a great possibility of finding out that the ticket is sold out. Then, it becomes time wasted that the customer could have been doing something else. In addition, unlike the outlets which take cash only, Tickets on-line allows one to pay with a credit card. Also, the interface is very simple to use. It guides the customer through the transaction step by step; therefore, anyone can use it.

## Benefits and future expansion

The 24-hour availability of the system makes it even more convenient to use, and customers do not have to worry about the hours of service. They will have the privilege to buy a ticket without a time constraint and with the convenience of ordering from their own home or office. Tickets on-line will allow the customer to browse for any kind of event. The customers can use their time to search for information even though they may not exactly know for what they are looking. Tickets on-line is created with an interface that can be expanded to ATM-like settings and therefore, will increase more access to buying tickets. We have found that the ATM option for buying tickets has been proven to be very cost effective. For example, Continental Airlines, a major airline company, has used the ATM option. They prove that it can be very beneficial. As shown by the following graph, electronic ticket sales are increasing. They also represent a growing percentage of the total amount of ticket sales. Thus, the use of an interface that allows the customers to directly purchase the tickets not only helps the customer, but it is very profitable for the company as well.